

## **Natural Sciences 102 -- Spring 2004**

Homework #9 May 25, 2004 THE LAST ONE!!!

Due in class June 1, 2004



### **The Rocky Science Foundation (RSF) Announces a Call for Proposals**

Your final homework, which counts four times as much as a single homework problem, is to write less than a one-page proposal to the *Rocky Science Foundation*. The proposal will be for a project to discover something about the universe. In the proposal you should state why you want to know it, how you intend to discover it, what instruments or equipment you might need, and how your discovery will fit into the goal of “understanding the universe.”

So tell me what you want to know about the universe. Is there something from the readings or lectures that excite you interest?

Money is no object. Dream big!

Sample topics: the distance scale, the distance to any single object, the most distant object, the nature of dark matter, gravity waves, black holes, Hawking radiation, the age of the oldest star, the age of Earth, the mass density of the universe, the geometry of the universe, what's inside a black hole, etc.

As always, the Director of the RSF will be in his office (AAC138) Tuesday and Thursday afternoons and other times by appointment.

### **News of the week**

- The award-winning class website is <http://home.fnal.gov/~rocky/natsci102/> .
- This week's laboratory will be “The Mass Density of the Universe.”
- Please finish reading Hawking.